

3.1.3. Block counts

Objective

By observing individuals/groups present in a sector (block) moving within it.

Measure estimated

Population density and population structure.

Applicability

Ruminants, mostly in Alpine environment.

Methodology

The procedures to implement this method are like vantage point counts, but the observer moves within a sector to detect the greatest possible number of individuals, obviously avoiding double-counting. This method should be implemented only in open areas where operators can be sure avoiding double-counting. Indeed, it is often used to estimate wild ruminants in Alpine environment (e.g., Alpine chamois, Alpine ibex; Corlatti et al. 2015, Jacobson et al. 2004).

The implementation of block counts needs a relatively large number of operators to simultaneously collect data in neighbouring sectors. Often the operator must have the skills to use proper optical instruments and to recognize sex-age classes from afar. The wildlife managers should be aware that by using block counts they can obtain the minimum number of alive individuals in the sample area and not absolute population size. Like vantage point counts, also for block counts is hard to assess the sampling error, which can be large due to occasional conditions (e.g., unfavourable weather). However, for instance in chamois block counts yields a minimum population size underestimated in respect with the population size estimated by using mark-resight (Corlatti et al. 2015), even if the value estimated by using block counts falls in the range of confidence values range of the mark-resight R one.

Evaluation

- **Pro:** low costs in relation to the efforts.
- **Con:** risk of underestimation.
- **Accuracy:** medium to high: possible underestimation, accuracy potentially affected by environmental conditions, especially broken environments.
- **Habitat:** open (esp. hilly and mountainous), possible in mixed landscapes, not applicable in pure forest landscapes.



